PERGAMON

Applied Radiation and Isotopes 54 (2001) XV–XIX

Applied Radiation and Isotopes

www.elsevier.com/locate/apradiso

AUTHOR INDEX VOLUME 52

Abd Elaziz M. A., 23
Abdel-Haleem S. A., 147
Adem E., 1229
Ahmad S., 31
Ahmed J., 31
Aixia W., 165
Al-Arifi M. N., 23
Al-Bokari M. M.-A., 23
Al-Dhawailie A. A., 23
Aldo Fazio, 745
Almgren A., 1441
Alonso-Munoz A., 509
Altzitzoglou T., 493
Altzitzoglou T., 539
Alves F., 899
Ambe S., 803
Amiot-Péron M. N., 649
Ando A., 211
Ando I., 211
Andreeff M, 63
Andrews J. N., 965
Angelini P., 745
Aragno D., 1059, 1203
Arnold D.,725
Aseeva E. A., 1153, 1171
Aspiazu J., 289
Atamanenko O., 1077, 1305
Azorin J., 1243

Baeten P., 399
Baïetto V., 229
Bailador A., 335
Balata M., 691
Ballesteros E., 27
Banerjee D., 831
Banerjee K., 1399
Banerjee S., 69
Baraboy V., 1305
Barbier M., 427
Barquero L. R., 569, 637, 679
Bartoll, J. 1099
Bartolotta A., 1197
Bayankin S., 1287
Bé M.-M., 791
Benke R. R., 271
Berridge M. S., 55
Biagini R., 745
Bickel M., 509
Blackwell B. A. B., 1337
Blanchis P., 427
Blanco Rodríguez M. P., 705
Bland C. J., 341
Blessing G., 1431
Bobin C., 403
Böck E., 1135
Boess C., 251
Bögl K. W., 251
Bogni A., 87
Bogushevich S. E., 1217
Boldú J. L., 1229
Bonotto D. M., 965
Borisovich Brik A., 1071
Bøtter-Jensen L., 831
Bouchard J., 403, 441, 699
Bowles N. E., 381
Brabec V., 387
Briançon C., 557
Brik A., 1077, 1305
Brik V., 1077, 1305
Brilli M., 957
Broda R., 643, 673
Bruggeman M., 399, 771
Brunetti A., 1345
Buchalla R., 251
Bugay A. A., 1189, 1371
Buzinny M., 905

Cabrera E., 1229
Cabrera M. E. M., 143
Calderón T., 1229
Callens F., 1221, 1317, 1327
Canet M. J. M., 711
Carchon R., 399, 771
Carles A. G., 657
Cassette P., 403, 627, 643, 669, 673
Cavouras D., 119
Cedervall B., 1117
Cessna J. T., 615
Chang C.-S., 217
Chang Y. S., 851
Charmasson S., 927
Chattopadhyay P., 217
Chechev V. P., 601
Chen Z. Q., 39
Chevallier P., 649
Chistopolskij A. S., 1139
Chiu Y.-H., 217
Chumak V. V., 1059, 1283
Chung J.-K., 851
Chyliński A., 663
Ciaranfi N., 957
Ciocanel M., 581
Coenen H. H., 923, 1431
Collé R., 1
Coron N., 403
Coursey B. M., 311, 609
Coursol N., 557
Csikai J, 93
Curry R. D., 189

D'achenko L. V., 1153, 1171
Dahlgaard H., 697
Das N. R., 1393, 1399
Das S. K., 185
Dayras F., 357
Daza M. J., 777
De Angelis C., 1197, 1203
De Felice P., 745
De Frenne D., 1221
De Goeij J. J. M., 77
de Jesus E. F. O., 1297, 1375
de Lavison P., 381, 475, 581
de Marcillac P., 403
de Paula U., 1203
de Sanoit J., 357
Debuyst R., 1327
Décombaz M., 419
Degteva M. O., 1287
Dejehet F., 1327
Denecke B., 351, 467, 493
Dennis Chasteen N., 1337
Desrosiers M. F., 1265, 1371
Dias Neto C. M., 1345
Dim L. A., 1009
Dmitrenko V. V., 739
Dolo J. M., 1357
Domracheva E. V., 1153, 1171
Doze P., 857

PII: S0969-8043(00)00390-0

Dragoun O., 387
Duke M. J. M., 1413
Duliu O. G., 1385
Dutschka K., 181

Edwards A. A., 1107
Egger P., 1135
Egorov A. G., 601
EI-Dine N. W., 147
EI-Shershaby A.,
Elizondo N. V., 27
Elsinga P. H., 857
Endo S., 1165
Espartero A. G., 407
Etcheverry M., 455, 481
Ewa I. O. B., 1009
Eyrolle F., 927

Fainstein C., 1195
Falguères C., 1357
Fattibene P., 1059, 1197
Fedortseva, R. F., 1121
Fezoulidis I., 199
Filossofov D., 357
Filushkin I. V., 1139
Flores C. J., 1229
Frána J., 387
Franke W.-G., 63
Frechen M., 1327
Fredlund K., 1441
Freudiger B., 691
Fukuda N., 211
Furetta C., 243
Futatsubashi M., 225

Gabitov R. M., 499
Gajendran V., 299
Gancheva V., 195
García-Talavera M., 777
García-Toraño E., 591, 637
Gavrilin Y., 1165
Girzikowsky R., 1179
Glavič-Cindro D., 765
Gleisberg B., 717
Golub E. V., 1149
Gómez Escobar V., 705
González A., 335
González C., 335
Gorostiza C., 335
Gorozhankin V. M., 557
Gostely J.-J., 447
Grassin D., 427
Gratchev V. M., 739
Greiner V. 649
Grigorescu E. L., 487, 505
Grün R., 1317
Guerrero-Carbajal Y. C., 1107
Guibert P., 229
Guin R., 185
Gunji H., 365
Günther E., 471

Hainos D., 627, 643
Han K. H., 393
Han S., 1419
Harada N., 845
Haradahira T., 199
Harmon J. F., 873
Haskell E. H., 1059, 1065, 1077
Hassan G. M., 1209, 1247
Hattori W., 1351
Hayashi N., 733
Hayes R. B., 1059, 1065
He Q., 865
Hernández A. J., 1229
Hernández H. H., 143
Hess E., 1431
Heusser G., 691
Hideaki Nagata H., 573
Hill C., 509
Hino Y., 545
Hohn A., 923, 937
Holm S., 899
Homma Y., 225
Honig A., 369
Horvath, G., 87
Hoshi M, 1165
Hou M. D., 39
Hult M., 351, 493, 711
Husband L. J., 475, 581
Hwang H. Y., 393, 435
Hwang W.-S., 523

Ibrahim M. A., 47
Ido T., 87, 175
Ignatiev E., 1059, 1287
Ikemoto M., 199
Ikeya M., 1209, 1247, 1259
Ikpokonte A. E., 1009
Inoue H., 1407
Invannikov A. I., 1291
Iqbal M. Z., 19
Isaksson M., 1441
Ishii S.-I., 175, 225
Ishikawa I., 733
Ishiwata K., 225
Isozumi Y., 943
Ivan C., 487, 505
Ivannikov A. I., 1059, 1165, 1275
Iwamoto S., 733, 545
Iwata R., 87
Janßen H., 533, 595
Jansen W. P. A., 77
Janszen H., 883, 955
Jęczmieniowski A., 663
Jenk U., 717
Jensen H. J., 899
Jensen M., 899
Jeong J. M., 851
Jerome S. M., 381, 475
Jinzhou D., 165, 813, 821
Johnston P. N., 711
Jubeli Y. M., 1003

Kagoshima M., 1407
Kandarakis I, 119
Kanosue K., 1259
Kaplan M. A., 1145
Kapteijn F., 77
Karmalitsyn N. I., 499
Karmann I., 1345
Katano R., 943
Kawamura K., 225
Kearfott K. J., 271,1419
Keightley J. D., 581
Kennedy G. 377
Kenner G. H., 1059, 1065
Keyser U., 369
Khalid M., 19
Khalid N., 31
Khamidova L. G., 1275, 1291
Kharchenko T., 1161
Kharisov B. I., 27
Kharitonov I. A., 415
Khaykovich I. M., 1451
Khvostunov I. K., 1149
Kim Y. J., 851
Kinoshita Y., 1209
Kinuya S., 211
Király B., 93
Kirsten T., 691
Kitis G., 243
Klein R., 955
Knapp Jr, F. F., 63
Knust E. J., 181
Kobzev Y. N., 1171
Kogure H., 545
Köhler M., 711, 717
Kolesnik S., 1371
Kondrashov A. E., 1165, 1275
Korun M., 759, 765, 785
Koshta A. A., 1059, 1287
Kothari K., 69
Kovács, Z., 87
Kovalík A., 387
Kravtsov V. Yu., 1121
Kropp J., 63
Kulczykowska K., 1456
Kwok Y. H., 237

Laedermann J.-P., 419, 447
Lahiri S., 797, 1393, 1399
Lange C. S., 1117
Laubenstein M.,691
Laurent M., 1357
Leblanc E., 403
Leblanc J., 403
Lee D. S., 851
Lee J. M., 393, 435
Lee M. C., 851
Lee Y. J., 851
Lépy M.-C., 791
Lerche I., 957
Lienham S., 381, 475, 581
Liow J.-S., 205
List V., 1129
Liu K. J., 1031
Lloyd D. C., 1107
Lo J.-M., 217
Lopes R. T., 1093, 1375
Los' I., 905
Los Arcos J. M., 335, 569, 679
Loskiewicz J., 1456
Lozano J. C., 705
Lu T.-H., 217
Luca A., 481, 487, 505
Lucas L. L., 527
Lund A., 1235
Lund E., 1235
Lyons R. G., 1051

MacMahon T. D., 585
Makepeace J. L., 381, 475
Maletka K., 673
Malonda A. G., 657
Man C. K., 237
Manikandan N. M., 299
Manohor S. B., 797
Martinčič R., 765
Martínez E. G.-T., 347
Masaoka S., 943
Matsumoto S., 211
Mattacchioni A., 1203
Matthys P., 1221
Matui S., 545
Matveeva N. P., 1145
McMahon C. A.,
McQuarrie S. A, 1413
Meenakshisundaram V., 299
Mehta K., 1179, 1371
Mercer J. R., 1413
Michielsen N., 427
Michotte C., 319
Mikhailova G. F., 1149
Milyutina G. I., 1171
Min S. S., 1337
Mincher B. J., 189
Miranda S., 289
Mitchell P. I., 697
Miyahara H., 573, 733
Miyake M., 1031
Miyauchi J., 175
Mondelaers W., 1221
Montero M. E., 289, 891
Moquet J. E., 1107
Morel J., 455, 481, 509
Moreno E., 289
Moreno-Cantu J., 205
Mori C., 573, 733
Muñoz E., 1229
Muntele I., 621
Murray A. S., 831
Murrieta S. H., 1229
Mushtaq A., 19
Mutoh M., 199

Nadejina N. M., 1149
Nadezhina N. M., 1145
Nagy V., 1039, 1371
Napier S., 509
Nayak D., 797, 1393, 1399
Nechai V. V., 1171
Neder H., 777
Neronova E., 1161
Nickles R. J., 899
Niese S., 717
Nikiforov A. M., 1121, 1161
Nikulin M. S., 933
Nindel K., 717
Nir-El Y., 753
Nishiyama S., 845
Nofz M., 1099
Noll M., 1135
Nomicos C. D., 119
Norizawa K., 1259
Novak M. M., 993
Ntsoane T. P., 551
Nugis V. Yu., 1139, 1145, 1149

Obukhova T. N., 1153, 1171
Ohsawa D., 943
Okamoto N., 211
Okamura Y., 157
Oliveira L. M., 1093
Olshanskaya Y. V., 1171
Olsson S. K., 1235
Onischuk V. A., 1189
Onoma K., 545
Onori S., 1059, 1197, 1203
Orlova N. V., 1145
Ortiz F., 335
Oswaldo Baffa, 1345
Ouchi Y., 225
Ovalle M. P., 1229

Paepen J., 399
Pajón J, 289
Panayiotakis G. S., 119
Panichelli V., 1203
Park T. S., 393, 435
Pasalskaja L. F., 1283
Pascali C., 87
Paul A., 369
Peir J.-J., 105
Pelegrini F., 1297
Peraza E. H., 143
Persson L., 351, 1117
Persson L., 493
Petetti E., 1197
Petin D., 1165
Petrenko T. L., 1189
Picolo J. L., 427
Pillai M. R. A., 69
Piña G., 407
Pinkert J, 63
Piton F., 791
Pivovarov S., 1255
Plagnard J., 403, 455, 791
Pochwalski K., 673
Polischouk A., 1117
Pommé S., 377
Populus P., 649
Potetnya O. I., 1149
Pressl S., 1129
Pressyanov D., 427
Prokic M., 97, 243
Protas J. C., 649
Pujol LI., 891

Qaim S. M., 923, 937, 1431
Quintana B., 777

Radoszewski T., 627, 663
Raghunath V. M., 299
Ramaswami A., 797, 1399
Ratel G., 313
Rau W., 691
Razdolescu A. C., 487, 505
Regulla D. F., 1023, 1265
Reher D. F. G., 313, 493
Reyes M. C. L., 143
Rivera T., 1243
Rivkind N. B., 1153
Rodríguez M., 407
Rodríguez Martínez N., 143
Romanikhin V. P., 347
Romanyukha A. A., 1059, 1065, 1265, 1287
Rossander-Hulthén L., 1441

Rossi A. M., 1085, 1093, 1297, 1375
Roteta M., 637
Röttger S., 369
Rüdiger H., 1135
Rukhin A., 1255
Ryšavý M, 387

Sadlo J., 1221
Saenko, A. S., 1145
Saha S. K., 185
Sahagia M., 487, 505
Sajjad M., 205
Salamon R., 243
Samei E., 1419
Sánchez A. M., 341
Sánchez E., 335
Sandberg A.-S., 1441
Sano Y., 985
Sansone Santamaria A., 1197
Saravi M., 1195
Sarma H. D., 69
Sasaki M., 199
Sasaki T., 175
Sasaoka H., 1209
Sato K., 845
Sazonova T. E., 415, 499
Scherbina O. I., 1071, 1077
Schöner W., 1135
Schönfeld E., 595, 883, 955
Schötzig U., 883
Schrader H., 325, 633
Schramm D. U., 1085
Schvoerer M., 229
Selivanova E. I., 1145
Selvasekarapandian S., 299
Senda M., 175, 225
Sephton J., 1185
Sepman S. V., 415, 499
Seredavina T., 1255
Sevan'kaev A. V., 1149
Shabana E. I., 23
Shahriari M., 127
Shao J., 1337
Sharma N., 137
Sharpe P., 1185
Shaw M., 335
Shepel N. N., 1149
Shepelevich K., 905
Shevchenko Yu., 1305
Shilnikova T. I., 415, 499
Shimasaki H., 157
Sholom S. V., 1059, 1283
Sibbens G., 351, 467, 493
Sima O., 725
Simpson B. R. S., 551
Sivakumar R., 299
Skinner A. R., 1311, 1337
Skvortsov V. G., 1059, 1165, 1275, 1291
Slozina N., 1161
Smirnov T. I., 993
Smironova S. G., 1145
Snykov V. P., 1165
Sohrabpour M., 127
Solís J., 1243
Song Y. W., 851
Soullié G., 649
Špalek A., 387
Sroor A., 147
Stanga D., 621
Starkova Ye. V., 1221
Stemmler P., 649
Stepanenko A. F., 1165
Stepanenko V. F., 1059, 1275, 1291
Stephan G., 1129
Stintz M., 63
Stöer R., 1099
Suárez J. A., 407
Suarez-Navarro J. A., 891
Sudár S., 937
Sugimoto M., 211
Sumino H., 157
Suzuki K., 199
Švec A., 633
Swakoñ J., 1456
Swartz H. M., 1031
Szabo T., 351

Takada J., 1165
Takahata N., 985
Takaki S., 1209
Takematsu N., 803
Takeuchi N., 545, 733
Tan S. M., 1051
Tanaka A., 199
Taylor D. M., 911
Terlikowska T., 627, 643
Terlikowska-Drożdziel T., 663
Teslenko V. V., 1189
Thaurel B., 509
Thieme K., 533
Tikunov D. D., 1165, 1275, 1291
Timón A. F., 341
Toheed A., 31
Tomé F. V., 705
Tominaga T., 157
Tomiyoshi K., 175
Tonami N., 211
Tonchev A. P., 873
Toyoda S., 1351, 1357
Tsoupko-Sitnikov V., 357
Tsuksda H., 845
Tsyb A. F., 1145, 1275, 1291
Turai I., 1113
Turek K., 427
Turi B., 957

Udovichenko A. I., 1171
Ugolev I. I., 1217
Ulin S. E., 739
Ulusoy Ü., 1363
Unterweger M. P., 527
Usman K., 585
Usuda S., 365
Uteshev Z. M., 739

Vaalburg W., 857
Van Der Linde S. C., 77
van der Wouden E. A., 857
Van IJzendoorn L. J., 77,
van Waarde A., 857
Vana N., 1135
Vanhaelewyn G., 1221, 1317
Vénos D., 387
Vidmar T., 785
Villeneuve G., 229
Vintró L. L., 697
Virk H. S., 137
Visser. T. J., 857
Vlasik K. F., 739
Vodenik B., 765
Voinchet P., 1357
Voinov V. G., 993
Voisin V., 427
Vorobiov A. I., 1153, 1171
Vylov Ts., 557

Wafcheck C. C., 1297
Wagner E. C., 1419
Walczak T. M., 1031
Walling D. E., 865
Wang C.-K. C., 1419
Wang H. F., 803
Wang S. J., 39
Wang T.-K., 105
Wang Z., 39
Watanabe Y., 199
Weinreich R., 181
Wenming D., 165, 813
Wieser A., 1059, 1287
Williart A., 335
Winkler E., 1195
Wolf C., 1135
Woodman A. P., 381
Woods D. H., 381, 475, 581
Woods M. J., 313, 381, 475, 581
Woods S. A., 475, 581
Wunderlich G., 63
Wurdiyanto G., 573

Xiangke W., 165, 813, 821
Xiongxin D., 165, 821

Yakushev E. A., 387, 557
Yamada T., 545
Yamada Y., 157,
Yamanaka C., 1209
Yanagida K., 573
Yanai K., 87
Yartseva N. M., 1121
Yasuda K., 365
Yordanov N. D., 195
Yoshida A., 573
Yuan M.-C., 523

Zakharova A. V., 1171
Zamulaeva I. A., 1145
Zanevsky A.V., 415, 499
Zheng L., 55
Zhi L., 813
Zimmerman B. E., 615
Zuyi T., 165, 813, 821

PERGAMON

Applied Radiation and Isotopes 54 (2001) XXI–XL

Applied Radiation and Isotopes

www.elsevier.com/locate/apradiso

SUBJECT INDEX VOLUME 52

Absorption
Coefficients linear, of liquid scintillators: measurement using synchrotron radiation 649
Optical, in the IR and UV region: studies of γ- and electron irradiated sugar crystals 1229
Accident
Clearance workers at Chernobyl: stable and unstable aberrations in lymphocytes 1153
Liquidators(Chernobyl clean-upworkers): use of EPR to assess dose 1283
Nuclear: assessment of damage by ESR studies 1255
Radiation: role of cytogenics in early triage 1107
Radiation, Gioânia victims: ESR dosimetry of teeth 1297
Retrospective dosimetry by EPR on tooth enamel samples 1275
Actinium
^{227}Ac determination in uranium mining waste waters by γ-ray spectrometry 717
Activation analysis
INNA of rocks from Cayajabos petroleum ore 143*
NA: use to compare different types of glass and aluminium for use as containers for irradiation samples 147
β_2-Adrenoceptor agonist
Evaluation of [^{11}C]procaterol for PET 857
Alanine
Dosimeters used for food processing and sterilisation: temperature stabilisation 1371
ESR dosimetry: calibration curve for γ-irradiation of blood 1195
L-α-: radical formation mechanisms after irradiation 1189
Pellets: automated handling in and out of an EPR spectrometer 1185
Polyethylene recipe of ASTM/NIST: transferability to Instituto Superiore di Santà (ISS) 1197
Albumin
^{188}Re labelled microspheres: preparation and biodistribution 63
Alpha particle
Back scattered: computer simulation 341
Detector: properties of a YAP scintillator 365
Emission probabilities in decay of ^{238}U 591
Emission probabilities of ^{237}Np 467
Alumina
Adsorption characteristics of 47 elements (Na-Bi) 821
Sorption and desorption of Eu and Yb: mechanism and effect of fulvic acid 165
Use as adsorbent in separation of ^{111}Ag from neutron irradiated palladium 19
Aluminium
For use as a container fór irradiation samples: NA analysis 147
Americium
Source preparation using a rotating disk electrode 357

*Denotes a Technical Note.

PII: S0969-8043(00)00355-9

Amino acids
L-[3-^{11}C] aromatic: apparatus for synthesis by multienzyme reactions 845
^{11}C, ^{18}F and ^{75}Se labelled: generic biokinetic models for dosimetry 911
L-[β-^{11}C]: synthesis using an immobilized enzyme column 199
Ammonium tartrate
Development as an ESR dosimeter for clinical purposes 1235
Antimony
^{124}Sb standardization and half life measurement 415
Removal from aqueous solution by rice husks 31
Apatite
A type, carbonated: ESR spectra and γ-dose response compared with tooth enamel 1093
Hydroxy, A and B carbonated: ESR spectra 1085
Apparatus
Development of automated system for synthesis of L-[3-^{11}C] labelled aromatic amino acids 845
System for continuous production and infusion of [^{15}O]H_2O for PET activation studies 205
Argon
^{41}Ar: reactor production from argon clathrate 1413
Arrhenius curve
For irradiated dry ice: models for peak and resultant decay model 1259
Astrophysics
Study of production of ^{180m}Ta isomer in (γ,n) reactions 873
Auger electron
Calculation of emission in radioactive disintegration processes 595

BANDRI (Spanish National Reference Database for Ionising Radiations)
Main objectives 335
Barium
Sulphate/EPR dosimeter: suitability for use in medical radiology 1217
Beam
^{16}O: use to irradiate a $CsNO_3$ target to produce ^{145,146}Eu 1393
$^{16}O^{7+}$: use to produce hafnium and lutetium from a terbium target 1399
4-[^{18}F] Benzyl halides
Preparation 87
Beta particle
Emitter standardization: computer program for application of the TDCR method 673
Biokinetic model
Generic, for radionuclide dosimetry: ^{11}C, ^{18}F and ^{75}Se amino acids 911
Blood
Dicentric distribution of human peripheral lymphocytes: use in retrospective dose estimation 1139
γ-irradiation dose measurement using ESR/alanine dosimetry method and calibration curve 1195
Of Chernobyl accident clearance workers carrying rogue cells: stable and unstable aberrations in lymphocytes 1153
^{210}Po concentration in Saudis: effect of smoking 23
Tailed nuclei of lymphocytes in irradiated subjects 1121
Bolometer
Use in cryogenic installation for X-ray spectrometry 403
Bone
Accumulation of ^{105}Rh 211
Anisotropy effects of EPR signals and mass transfer mechanisms 1077
Book review
Environmental radiochemical analysis 307

Borehole
Parametric study for neutron induced capture γ-spectrometry using MCNP code 127
Boron
$^{10}B(p,n)^{10}C$ reaction: determination of excitation functions 899
Brick
Retrospective dosimetry: time dependence of OSL signals 831

Calcium
^{47}Ca determination in the human body by whole body counting 1441
Carbonate: generation and conversion of electronic defects by UV/Vis light 1099
Separation of ^{41}Ca and ^{45}Ca and measurement by LSC 407
Calibration
Factors: establishment for nuclides used in medicine 633
CAPINTEC CRC-12
Dose calibrator: determination of dial settings for various nuclides used in nuclear medicine 615
Carbon
Fiber: use as a resistive anode wire in a PSPC 943
^{10}C production: investigation of $^{10}B(p,n)^{10}C$ reaction 899
^{14}C
Analysis of detection efficiency variations for implementation of TDCR method in LSC 643
Scintillation counting measurements 393
Carbon dioxide
[^{10}C] labelled: possibility of use of $^{10}B(p,n)^{10}C$ reaction 899
Solid (dry ice) radiation effects: ESR spectrum models for a peak on the Arrhenius curve 1259
Carbonate
Groups in tooth enamel: thermal stability during EPR 1071
Rock dating by ESR: evaluation 1311
Cell
Rogue, in blood of Chernobyl accident clearance workers: stable and unstable aberrations in lymphocytes 1153
Cesium
Cs^+ sorption and desorption on red earth and its solid components: contribution and hysteresis 812
^{137}Cs
Distribution in pine trees planted 1997-8 in vicinity of Chernobyl 905
Inventory in soil and sediments: calibration of portable γ-detector for use *in situ* 865
Levels in soil and persons living in Zaborie village close to Chernobyl and dose estimation 1165
Probability model for radioactive contamination 993
Removal from liquid radioactive waste using zeolite 27
Uptake by freshwater fish 237
Nitrate target: irradiation with a ^{16}O beam to produce ^{145,146} Eu 1393
[^{11}C]β-CFT
HPLC separation from N-desmethyl precursor on reversed phase ODS column 225
Chlorine
^{38}Cl: determination of γ-ray relative intensities 733
Chromatography
Gas: analysis of volatile radiolysis products in γ-irradiated LDPE and polypropylene 251
Chromosone
Aberration: use in assessment of radiation casualties 1107
Aberration: use in dosimetry and assessment of individual radiosensitivity 1117
Abnormalities in leukemias diagnosed in residents of areas contaminated after Chernobyl 1171

Analyses of blood lymphocytes in persons occupationaly irradiated over a long period 1161
Comparison of conventional and FISH analysis for retrospective dosimetry after acute accidental exposure 1149
Dicentric: in irradiated subjects 1121
Dicentric: number as an indicator of radiation exposure in low dose range 1129
CIEMAT/NIST
LSC tracer method: use in standardization of ^{237}Np 471
Method in LSC: use in standardization of ^{110m}Ag 637
[^{11}C]β-CIT
HPLC separation from N-desmethyl precursor on reversed phase ODS column 225
Clinoptilolite
Use in cleaning of liquid radioactive waste 27
Code
Computer: for EPR assessment of dose to tooth enamel 1287
For comparison of internal conversion coefficient data 557
GEANT: use to simulate response of IG 11 $4\pi\gamma$ ionization chamber 447
Solidang: for computation of effective solid angle and correction factors for γ-ray spectroscopy based waste assay 771
Coincidence summing
Corrections: fast procedures in γ-ray spectrometry 745
Corrections for γ-ray spectrometry: computer program ETNA 791
In γ-ray spectrometry by excitation of matrix x-rays 725
Colloid
Bound radionuclides in natural waters: ultrafiltration of large volumes 927
Column
Enzyme: use in synthesis of [L-[β-^{11}C] amino acids 199
ODS reversed phase: use in HPLC separation of [^{11}C]β-CFT or [^{11}C]β-CIT from an N-desmethyl precursor 225
Computer
Code (STAPRE) for nuclear model calculations on proton and deuteron induced reactions on ^{122}Te and ^{120}Te 937
Procedure for EPR dosimetry on tooth enamel 1287
Simulation
Of back scattered α-particles 341
Of radical formation in irradiated L-α-alanine 1189
Use in assessment of application of differential and integral techniques in dosimetry 1051
Container
For irradiation samples: examination by NAA of glass and aluminium for suitability 147
Contamination
Radioactive: probability model 993
Surface measurements: calibration of reference sources 533
Copper
^{62}Cu: calibration settings using Capintec CRC-12 dose calibrator 615
Counter
Position sensitive proportional (PSPC) with a resistive wire anode of carbon fiber: resolution 943
Counting
Coincidence: correlation effect in activity measurement of ^{59}Fe 435
$4\pi\beta$-γ coincidence method: use in standarization of ^{169}Yb 505
Liquid scintillation
Analysis of detection -efficiency variation techniques for the implementation of the TDCR method 643

And $4\pi\beta$-γ coincidence for standardization of ^{110m}Ag 637
For purity control of ^{99m}Tc solutions: application of α/β discrimination 627
$4\pi\gamma$ coincidence and anticoincidence methods: use in standardization of radionuclides 665
Of ^{110m}Ag: stability problems in commercial scintillators 679
Three photomultiplier system: processing of pulses by a MAC 3 electronic module 669
Use for standardization of electron capture radionuclides 657
Use to determine half life of ^{49}V 569
Multichannel: importance of covariances for uncertainty estimates 621
Optimum conditions for ZnS(Ag) scintillation detectors 891
Statistics: theory of overdispersion caused by fluctuating probabilities (**51** p565 Errata) 153
Statistics with a digital α-spectrometer 377
Sum peak coincidence and 4πe-X coincidence: use to standardize activity of ^{125}I 523
Systems: use of MTR-2 to process pulse height and dead time corrections 441
Whole body: to determine the retention of ^{47}Ca 1441

Cysteine-oximes
Synthesis and radiolabelling with ^{99m}Tc and pharmacological behaviour 69

Cytogenetics
Features of leukemias diagnosed in residents of contaminated areas after the Chernobyl accident 1171
Investigation of occupationally irradiated persons after long exposure 1161
Role in early assessment of radiation casualties 1107

Data
Base for ionizing radiations: Spanish National Reference 335
Three-dimensional acquisition system for standardization of β-emitting nuclides 393

Dating
ESR
Of a single quartz crystal from the Menderes massif Turkey 1363
Of a toxodon tooth from a Brazilian karstic cave 1345
Of quartz: effect of formation and decay of the E_1' center and its precursor 135
Of sediments: application of bleaching of signal by sunlight 1357
Evaluation of ESA 1311
In tooth enamel by ESA: improvements 1337

Dead time
Corrections: use of MT.-2 in counting systems 441

Decay
Data of ^{169}Yb: results from the EUROMET action 410 455
Monte Carlo simulation 419
Of ^{203}Hg: redetermination of total internal conversion coefficient of the 279keV transition 955
Of ^{237}Np: standardization and photon emission probabilities 883
Of ^{186}Re 581
Of ^{238}U: α-particle emission probabilities 591
Review of ^{67}Ga scheme 551
Scheme data of ^{237}Np: standardization and measurement 475

Detector
α-ray: performance characteristics of YAP scintillator powder 365
Cryogenic: use for x-ray measurements below 100 mK 403
Field: use of secondary ^{222}Rn standards 427
Field portable γ: calibration for in situ determination of ^{137}Cs in soil and flood plain sediments 865
Ge-γ-ray: relative efficiency curves for radionuclides emitting two γ-rays 733

High pressure Xe: use for γ-ray spectrometry 739
Proper modelling of characteristics for Monte Carlo simulations 777
TLD with a pulsed laser-heating scheme 1419
ZnS(Ag): selection of optimum conditions 891
Distribution coefficients K_d's
For 47 elements (Na-Bi) on calcareous soil, red earth and alumina: a multi tracer study 821
Dosimeter
Alanine
–EPR system: automated for handling alanine pellets 1185
–ESR: calibration for use in γ-dosimetry in 10-30Gy range 1195
For food processing and sterilization: temperature stabilization 1371
–Polyethylene, ASTM/NIST recipe: transferability to Instituto Superiore di Sanità (ISS) 1197
Capintec CRC-12: experimental determination of dial settings for radionuclides used in medicine 615
Characterization of new production of MgB_4O_7:Dy,Na thermoluminescent material 243
EPR for medical radiology: use of barium and strontium sulphate 1217
ESR
Based on polytetrafluoroethylene 1243
Material: development of ammonium tartrate 1235
Strategy for finding new materials 1209
IAEA alanine-ESR transfer: intercomparison studies 1179
LiF;Mg,Ti TL: correlation of LET dependent TL response and gentoxic endpoints after proton irradiation 1135
Dosimetry
Bio
IAEA's co-ordinated research project 1998–2000 1111
Individual radiosensitivity in the context of DNA double strand breaks and chromosomal aberrations 1117
Of acute and prolonged irradiation cases: determination of somatic mutant frequencies at glycophorin A and T-cell receptor loci 1145
Retrospective: determination from conventional and FISH chromosome analysis after high accidental exposure 1149
Chromosome aberration: use in assessment of radiation casualties 1107
Comparison of correlation of LET dependent TL response of Li:Mg,Ti TL dosimeters and gentoxic endpoints 1135
Depth dose distribution and shallow dose equivalent using a TLD pulsed laser heating system 419
EPR
Accuracy considerations 1039
–Alanine: use in planning verification of electron arc therapy treatment 1203
And luminescence: assessment of application of differential and integral techniques 1051
Development of non-destructive additive dose technique 1065
Dose reconstruction in tooth enamel 1265
In vivo: feasibility in humans after accidental exposure 1031
Of fossil tooth enamel: dose assessment using maximum likelihood common factor analysis (MLCFA) 1317
On tooth enamel: computer procedure assessment 1287
On tooth enamel: sources of error and correction 1291
Retrospective: use for assessment after a large scale accident 1275
Some aspects for liquidators (Chernobyl clean up workers) 1283
ESR
Gamma/alanine in the 10–30Gy range 1195

Measurements to identify and determine dose in irradiated vegetable products 1375
Of teeth in Gioânia accident victims 1297
Review of the last 20 years 1023
Study of Li and Mg organic compounds 1247
Generic biokinetic models for ^{11}C,^{18}F and ^{75}Se labelled amino acids 911
High dose: IAEA intercomparison in ^{60}Co field 1179
Low: assessment of use of reciprocal translocations as an indicator of radiation dose 1129
Neutron: rate dependence on shield thickness 47
Retrospective
Estimation of dose from dicentric distribution in human peripheral lymphocytes 1139
Estimation of dose to quartz using a single aliquot regenerative dose protocol 831
In teeth: reliability 1305
Studies in Zaborie village in the vicinity of Chernobyl 1165
Dry ice see Carbon dioxide

E' centre
Formation and decay: effect on ESR dating of quartz 135
Electrode
Rotating disk: use in the preparation of α-sources 357
Electron
Arc therapy treatment: use of alanine/EPR dosimetry to measure dose distributions 1203
Auger: calculation of emission probabilities in radioactive disintegration processes 595
Energy losses within ^{241}Pu sources 387
EMI 1.2 and 2.0 program
Use in standarization of electron capture radionuclides 657
EMISSION
Program for calculation of emission probabilities of X-rays and Auger electrons 595
ENDOR (Electron nuclear double resonance)
Use in decomposition study of irradiated sucrose 1221
Environment
ESR study of objects from Semipalatinsk nuclear test site 1225
Enzyme
Column: use in synthesis of L-[β-^{11}C] amino acids 199
EPR
Analysis of tooth enamel: comparison of sample preparation and signal evaluation methods 1059
Application for retrospective dosimetry of large scale accident: use of tooth enamel 1275
Dose reconstruction in tooth enamel 1265
Dosimetry
Accuracy considerations 1039
Non-destructive additive dose technique 1065
Of liquidators (Chernobyl clean-up workers) 1283
On tooth enamel: new computer procedure 1287
On tooth enamel: sources of error and correction 1291
Of tooth enamel: temperature stability of carbonate groups 1071
Signals: anisotropy effects and mechanisms of mass transfer in tooth enamel and bones 1077
Spectra in Greek white marbles: correlation with TL peaks 229
Spectra of irradiated sucrose: decomposition study 1221
Spectroscopy: use to identify irradiation of cellulose containing foodstuffs 195
Spectrum deconvolution and dose assessment of fossil tooth enamel 1317
Use to determine dose in humans after accidental exposure 1031
Use to identify irradiation of cuttlefish 1385

Errata
Theory of overdispersion in counting statistics caused by fluctuating probabilities (**51** p. 565) 153
ESARDA (European Safeguards research and Development Association)
Evaluation exercise for uranium enrichment measurements 509
ESR
Applied: review of progress in the last twenty years 1023
Bleaching of signals by sunlight: application to dating of sediments 1357
Dating
Evaluation 1311
Of a single quartz crystal from the Menderes Mass of Turkey 1363
Of quartz: effect of formation and decay of the E' center and its precursor 1351
Of tooth enamel: improvements 1337
Study of the annealing characteristics of solid CO_2 1259
Dosimeter based on polytetrafluorethylene 1243
Dosimeter material: development of ammonium tartrate 1235
Dosimeter materials: study of Li and Mg compounds 1247
Dosimetry of teeth of Giônia accident victims 1297
Gamma dosimetry in the 10–30 Gy range and application to measurements of blood 1195
Measurements for identification and dose determination of irradiated vegetable products 1375
Of environmental objects from Semipalatinsk nuclear test site 1255
Spectra of A-type carbonated apatite compared with tooth enamel 1093
Spectrum of dry ice: radiation effects and models for a peak on the Arrhenius curve 1259
Study of CO_2^- radicals in irradiated A and B carbonate containing apatites 1085
Study of elephant tooth enamel from Kärlich-Seeufer, Germany 1327
Study of γ- and electron irradiated sugar crystals 1229
Use to determine accumulated dose on persons living in Zaborie, a village in the vicinity of Chernobyl 1165
ETNA (Efficiency transfer for nuclide activity measurements)
Program for γ-ray spectrometry 791
EUROMET
Action 410; results on the decay data of ^{169}Yb 455
Europium
^{145,146}Eu production and separation from a $CsNO_3$ target using a ^{16}O beam 1393
Sorption and desorption on alumina: mechanism and effect of fulvic acid 165
EVINEW
Program for half life data evaluation 601
Excitation functions
Determination for ^{10}B(p,n)^{10}C reaction with a view to production of [^{10}C]carbon dioxide 899
Of ^{120}Te(d,xn) ^{121,120m,g}I reactions from threshold up to 13.5 MeV 923
Extraction
Liquid-liquid using HDEHP: use to separate carrier free Yb and Tm from heavy ion irradiated gadolinium target 797

Fiber
Carbon: use as resistive anode in a PSPC counter: position encoding 943
Figures-of-merit
In waste treatment by radiolysis: considerations for choice 189
Film
Gamma-irradiated LDPE and polypropylene: analysis of volatile radiation products by thermal desorption-gas chromatography-mass spectrometry 251

Fish
Cuttlefish irradiation: identification by EPR 1385
Freshwater: ^{137}Cs uptake 237
FISH (Fluorescence in situ hybridization)
Detected translocations as an indicator of radiation exposures 1129
Detection of chromosome aberrations and dose estimation 1153
Measurement of chromosomal aberration in leukemias diagnosed in residents of areas contaminated after the Chernobyl accident 1171
Measurements on blood of Chernobyl victims and non-victims 1149
Fission neutrons
Attenuation by some hydrogenous shield materials 47
Fission product
Activity: use in iterative approach to fuel burn-up determination 105
Fluorine
^{18} F: calibration settings using Capintec CRC-12 data calibrator 615
^{18}F with an Al Target via ^{18}O(p,n)^{18}F reaction 1431
[^{18}F]Fluoromethyl iodide
Synthesis for use as precursor for fluoro-methylation of radiopharmaceuticals 55
Foil
Activation method of determining thermal neutron reflection 93
Food
Alanine dosimeter for processing and sterilization: temperature stabilization 1371
Cellulose containing: identification of irradiation by EPR spectroscopy 195
Irradiated vegetable products: identification and dose determination using ESR 1375
Irradiation: detection by EPR 1221
Free radical
Detection ESR spectrum of irradiated dry ice 1259
Induction in γ and electron irradiated sugar crystals: ESR and optical absorption studies 1229
Fruit
Irradiated: ESR measurements for identification and dose determination 1375
Fuel
TRIGA: burn-up determination using non-destructive γ-ray spectrometry 105
Fulvic acid
Effect on sorption of Eu and Yb on alumina 165

Gadolinium
Foil target irradiated with heavy ions: separation of carrier free Yb and Tm by liquid–liquid extraction with HDEHP 797
Gallium
Arsenide implanted with 500MeV Ne ions: investigation of defects 39
^{67}Ga: review of decay scheme data 551
Gamma ray
Calibration sources; use of ^{166m}Ho 545
Dose response of synthetic A-type carbonated apatite compared with tooth enamel 1093
Emission probabilities of ^{237}Np in equilibrium with ^{233}Pa 481
Emission probabilities of ^{186}Re and ^{188}Re 573
Emission probability data for ^{169}Yb 499
Standards: analysis of k-shell and internal conversion coefficients 557
Geology
Problems: metrological assurance for geophysical methods 1451

Glass
For use as container for irradiation samples: neutron activation analysis 147
Glycophorin 4
Determination of mutant frequencies for biodosimetry of acute and prolonged irradiation 1145

Hafnium
Cation exchange separation from ^{203}Hg 185
Separation carrier free from a ^{16}O activated terbium target 1399
Half life
Evaluations for ^{3}H, ^{35}S, ^{55}Fe, ^{99}Mo and ^{111}In using EVINEW program 601
Of ^{124}Sb 415
Of ^{233}Pa 585
Of ^{49}V 569
Helium
Flux from a sedimentary basin 987
Holmium
^{166m}Ho: absolute measurement and development of sealed sources for standardization 545
HPLC
Separation of [^{11}C]β-CFT or [^{11}C]β-CIT from an N-desmethyl precursor 225
Hydrogen
Content of bulk samples by determination of reflection cross sections of thermal neutrons 93
Hydrogenous shield material
Attenuation of fission neutrons 47

IAEA
Co-ordinated research project on biodosimetry 1998–2000 1107
High dose calibration intercomparison in ^{60}Co field 1179
Imaging
Medical, produced by $ZnSio_4$: Mn phosphor: assessment of information produced 119
Impurity
Radioactive: influence on SIR measurements 319
Indium
^{111}In half life: data evaluation using EVINEW program 601
Internal conversion coefficients
Analysis 557
Redetermination of 279keV transition following decay of ^{203}Hg 955
Iodine
^{120g} I production from the ^{120}Te(d,xn) – processes: evaluation 923
^{120m,g} I formation from proton and deuteron induced reactions on ^{122}Te and ^{120}Te: nuclear model calculations 937
^{124}I solutions: preparation after thermodistillation from $^{124}TeO_4$ targets 181
^{125}I: absolute counting by sum peak coincidence and 4πeX coincidence techniques 523
^{125}I: removal from radioactive waste 1407
Ion
Heavy, implantation of GaAs: investigation of defects 39
Ion exchange
Anion, paper membrane for removal of ^{125}I from radioactive waste 1407
Cation: use to separate trace amounts of ^{203}Hg and ^{181}Hf 185
Ionization chamber
Dose calibrator Capintec CRC-12: determination of dial settings for radionuclides used in nuclear medicine 615

IG 11 4π γ: simulation of response using GEANT Monte Carlo code 447
Secondary standard measuring system: calibration and consistency of results 325
Use as a secondary standard for activity 633
Ionizing radiation
Spanish National Reference data base 335
Iron
^{55}Fe half life data using EVINEW program 601
^{55}Fe: standardization by LSC and using EMI 1.2 and 2.0 programs 657
^{59} Fe activity measurement: correlation effect 435
Laser evaporated atoms: Mösbauer studies and their reactions with oxygen in argon matrices 157
Oxides in red earth: effect on Cs^+ sorption and desorption 812
Irradiation
Of cellulose containing foodstuffs: identification by EPR spectroscopy 195
Of cuttlefish: identification by EPR 1385
Of fruit and vegetable products: identification and dose measurement by ESR 1375

Lanthanide
Concentrations in rocks from Cayajabos petroleum ore by INAA 143*
Lead
^{210}Pb: standardisation after separation from daughters 381
Leukemia
In residents of areas contaminated after the Chernobyl accident and cytogenic features 1171
Lithium
Acetate dihydrate and phosphate: use as an ESR dosimeter 1247
Co-dopant: effect on thermoluminescence response of some phosphors 97
Sulfate and lactate: suitability for use in ESR dosimeter 1209
Luminescence
Optically stimulated (OSL): use to determine retrospective dose to quartz and bricks 831
Lutetium
Separation carrier free from a ^{16}O activated terbium target 1399
Lymphocytes
Aberrations in leukemias diagnosed in residents of areas contaminated after Chernobyl 1171
Dicentric distribution: use for retrospective dose estimation 1139
Stable and unstable aberrations in Chernobyl accident clearance workers 1153
Tailed nuclei in irradiated subjects 1121

Magnesium
Lactate: use in ESR dosimeter 1247
Sulfate and lactate: suitability for use in an ESR dosimeter 1209
Marble
White Greek: correlation between EPR spectra and TL peaks 229
Material
Radioactive: analysis and separation of ^{41}Ca and ^{45}Ca 407
Thickness measurement using scattered radiation 759
Maximum likelihood common factor analysis (MLCFA)
Application to EPR dose assessment of fossil tooth enamel 1317
Mercury
^{203}Hg
Decay: redetermination of total internal conversion coefficient of the 279 keV transition 955
Separation from ^{181}Hf by cation exchange 185
Metrology
Assurance for geophysical methods used to solve geological problems 1451

Radionuclide: equivalence of measurements 313
Techniques for radiology, ICRM 99, Prague: preface 311
Microsphere
^{188}Re labelled albumin: preparation for use in radiotherapy and biodistribution 63
Modulation transfer function (MTF)
Measurements: use to assess imaging performance of Zn_2Sio_4: Mn phosphor 119
Module de temps-mort reconductible (MTR-2)
Discriminator and dead time module for use in counting systems 441
Module for acquisition of triple coincidences (MAC 3)
Use for processing pulses from a three photomultiplier system 669
Molybdenum
^{99}Mo half life: data evaluation using EVINEW program 601
^{99}Mo SIR measurements: effect of ^{103} Ru impurity 319
Monte Carlo
Calculation
Of total-to-peak ratio in γ-ray spectrometry 785
Using MCNP code for borehole parametric study for neutron induced capture for γ-ray spectrometry 127
GEANT code: use to simulate response of the IG11 $4\pi\gamma$ ionization chamber 447
Modelling of electron scattering within radioactive sources 387
Simulations
Of nuclear decay schemes 419
Proper modelling of detector and source characteristics 777
Mössbauer
Study of reactions of laser evaporated iron atoms with oxygen in argon matrix 157

National Institute of Standards and Technology
Calibration of tritiated water standards 527
Neptunium
^{237}Np
Decay: activity concentration and photon emission probabilities 883
Determination of absolute α-particle emission probabilities 467
In equilibrium with ^{233}Pa: emission probabilities of main γ-rays 481
Standardization and measurement of decay scheme data 475
Standardization by CIEMAT/NIST liquid scintillation method 471
Source preparation using a rotating disk electrode technique 357
Neutron
Absorption cross section of rock samples from K, U and Th concentration 1459
Environmental: measurement of induced activation using ultra low level γ-ray spectrometry 711
Fission: attenuation by hydrogenous shield material 47
Passive assay technique for transuranic elements in nuclear waste 399
Thermal: reflection cross section determination by an activation method 93
Nickel
^{63}Ni: analysis of detection efficiency variation for implementation of the TDCR method in LS counting 643
Nitrogen
Deuteron irradiation to produce [^{15}O] nitrous oxide 77
Liquid, purification: removal of radon by cryo-absorption 691
Nitrous oxide
^{15}O labelled: in target production with high specific activity by deuteron irradiation of N_2 gas 77

Nuclear medicine
Determination of commercial 'dose calibrator' settings for nuclides 615

Organic matter
In red earth: effect on sorption and desorption of Cs^+ 812
Oven
Drying: of soil samples for γ-ray spectroscopy: ^{222}Rn loss 271
Oxygen
^{16}O beam: use to irradiate a $CSNO_3$ target to produce $^{145,146}Eu$ 1393
$^{16}O^{7+}$ beam: use to activate a terbium target and the separation of hafnium and terbium 1399
$\delta^{18}O$ composition of Montalbano Jonico section (Italy): evidence of precession and obliquity orbital forcing 957
Reaction with laser evaporated iron atoms in an argon matrix: Mössbauer study 157

Palladium
Natural, neutron irradiated: separation of ^{111}Ag using alumina as adsorbent 19
PET
Activation studies: system for production and infusion of $[^{15}O]H_2O$ 205
Evaluation of [^{11}C]procaterol as a β_2-adrenoceptor agonist 857
Petroleum ore
Rock: INAA analysis 143
Phosphor
MgB_4O_7:Dy,Na: new production and dosimetric characterisation 243
Thermoluminescence response: effect of lithium co-dopant 97
Zn_2SiO_4:Mn: assessment of medical imaging performance 119
PIXE
Elemental analysis of Cuban quaternary paleoclimate geological samples and speleothems 289
Plant
Soyabean and tomato: effect of soil acidity on uptake of trace elements 803
Plutonium
Oxidation state distribution in surface and sub-surface waters at Thule, NW Greenland 697
^{241}Pu source: measurement and analysis of conversion electron and β-particle spectra 387
Source preparation using a rotating disk electrode technique 357
Polonium
^{210}Po blood concentration in Saudi population: effect of smoking 23
Polyethylene
LDPE γ-irradiated film: analysis of volatile products by thermal desorption – gas chromatography – mass spectrometry 251
Polypropylene
Analysis of volatile radiolysis products by thermal desorption – gas chromatography – mass spectrometry 251
Polytetrafluoroethylene
Use for ESR dosimetry 1243
Positron
Annihilation measurements on effect of high energy heavy ion implantation in GaAs 39
Potassium
Concentration in Miocene rock from Carpathian Piedmont (Poland): correlation with neutron absorption cross section 1459
[^{11}C]Procaterol
Synthesis, biodistribution and assessment as a β_2-adrenoceptor agonist for PET 857
Program
EMI 1.2 and 2.0: use in standardization of electron capture radionuclides 657

EMISSION to calculate X-ray and Auger electron emission probabilities 595
ETNA; for efficiency transfer and coincidence summing corrections in γ-ray spectrometry 791
EVINEW to evaluate data for half lives of ^{3}H, ^{35}S, ^{55}Fe, ^{99}Mo and ^{111}In 601
For application of TDCR method to standardization of pure β-emitters 673
Protactinium
^{233}Pa
Decay: standardization and photon emission probabilities 883
Half life determination 585
Proton
Irradiation of TL dosimeters: correlation of LET dependent TL response and gentoxic endpoints 1135
Pulse height
Corrections: use of MTR-2 in counting systems 441
Pulses
From a 3- photomultiplier LS system: processing by MAC 3 electronic module 669
Loss with a digital α-ray spectrometer 577

Quality
Control of γ-ray spectrometry measurements 765
Quartz
Crystal from the Menderes massif (Turkey): ESR dating 1363
ESR dating: formation and decay of E_1' center and of its precursor 1351
Estimation of dose using the single aliquot regenerative-dose protocol for retrospective dosimetry 831

Radiation
Accidental in human: use of in vivo EPR dosimetry 1031
Casualties: role of cytogenetics in early triage 1107
Damage at accident and Semipalatinsk nuclear test site: assessment by ESR of environmental objects 1255
Effects in dry ice: models for a peak on the Arrhenius curve 1259
Exposure in low dose range: reciprocal translocations as an indicator 1129
Proton: correlation of LET dependent response of TL dosimeters and gentoxic endpoints 1135
Scattered: use in measurement of average thickness of a material 759
Radioactivity
Low level in marine biological samples 539
Measurements: importance of covariances for uncertainty estimates 621
Standards: needs in nuclear medicine 609
Use of an ionization chamber as a secondary standard: evaluation 633
Radiolysis
For waste treatment: considerations of figures-of-merit 189
Volatile products in LDPE and polypropylene film: analysis by thermal desorption-gas chromatography-mass spectrometry 251
Radionuclide
α-emitting in a wide area reference source: depth distribution determination 533
β-emitting: development of a 3-dimensional data acquisition method for standardization 393
Colloidally bound in natural waters: ultrafiltration of large volumes to enable determination 927
Determination of commercial 'dose calibrator' settings 615
Electron capture: standardization by LSC and use of EMI 1.2 and 2.0 programs 657
Equivalence of metrology 313
ICRM '99, Prague: metrology techniques 311
Natural distribution in soils of Gudalore, India 299

Needs for standards and measurements in nuclear medicine 609
Standardization: improved quantitative source preparation 351
Standardization: multimethodic and multiparametric system 663
Radiopharmaceutical
Needs for standards and measurements in nuclear medicine 609
Radiosensitivity
Of individuals: biological dosimetry in context of DNA double strand breaks and chromosomal aberrations 1117
Radiotherapy
Needs for radioactivity standards and measurements 609
^{188}Re labelled albumin in microspheres: preparation and biodistribution 63
Radium
Nuclides: determination in mining waters by γ-ray spectrometry 717
^{226}Ra determination by LS α- spectrometry: use of selective extractant in presence of U and Th 705
Radon
And progenies: measurement at the German radon reference chamber 369
Indoor levels in Hamirpur and Una districts of Himachal Pradesh, India 137
^{222}Rn
Detection at the μBq/m^3 range in nitrogen gas 691
Loss during oven drying for γ-ray spectroscopy of soil samples 271
Tracability chain from primary standard to field detector 427
Reference chamber
German: measurement of Rn and Rn progenies 369
Rhenium
Re(V) complex with 2-(2-pyridylmethylthio)-aniline: synthesis and characterisation 217
^{186}Re: standardization and decay data 581
^{186}Re and ^{188}Re
Calibration settings using Capintec CRC-12 dose calibrator 615
Precise measurement of γ- ray emission properties 573
^{188}Re labelled albumin microspheres: preparation and biodistribution 63
^{188}Re – tin colloid: preparation and comparison with ^{188}Re – sulfur colloid 851
Rhodium
^{105}Rh-EDTMP production and bone accumulation 211
Rice
Husks: potential for antimony removal from aqueous solutions 31
Rock
From Cayajabos petroleum ore: INAA measurement of rare earths and lanthanide concentrations 143*
Limestone and dolomite: interaction of water and transfer of ^{234}U and ^{238}U 965
Miocene from Carpathian Piedmont (Poland): estimation of thermal neutron cross section 1459
Uranium determination: comparison of INAA, DNC and CAS methods 1003
Ruthenium
^{103}Ru impurity in ^{99}Mo: influence on SIR measurements 319

Sample
Bulk: hydrogen content by determination of reflection cross sections of thermal neutrons 93
Cuban quaternary paleoclimate geological: PIXE elemental analysis 289
Irradiation container: examination by NAA of glass and aluminium for suitability 147
Marine biological references 539
Scintillator
Liquid
Measurement of linear absorption coefficients using synchrotron radiation 649

Stability problems of ^{110m}Ag 679
Selective extractants UREAX, THOREX, RADEAX: use in sequential determination of U,Th and ^{226}Ra by LS α-spectrometry 705
$YalO_3$:Ce powder: properties as α-ray detector 365
ZnS(Ag): selection of optimum conditions for use as a detector 891
Sea
Artificial and natural radionuclides in ocean shellfish material: activity measurements 539
Water (Thule, NW Greenland): oxidation state distribution of Pu 697
Sediment
ESR dating: bleaching of ESR signals by sunlight 1357
Flood plain: calibration of field portable detector for in situ inventories of ^{137}Cs 865
^{18}O composition of mud and silt in Montalbano Jonico section (Italy): evidence of precession and obliquity orbital forcing 957
PIXE analysis of karst of Sierra de San Carlos, Cuba 289
Uranium determination: comparison of INAA, DNC and CAS methods 1003
Uranium-thorium levels of the Kubanni river, Nigeria 1009
Selenium
^{75}Se γ-ray spectrometry excitation of matrix X-rays: coincidence summing 725
Shellfish
Ocean matrix: low level radioactivity measurements 539
Silver
^{110m}Ag
Stability problems in commercial liquid scintillators 679
Standardization by LSC and 4 $\pi\beta$–γ coincidence counting 637
^{111}Ag: separation from irradiated Pd using alumina as adsorbent 19
SIR (Système International de Reference)
Measurements: effects of impurities 319
Smoking
Effect on total blood concentration of ^{210}Po in Saudi population 23
Soil
Acidity: effect on uptake of trace elements in soyabean and tomatoes 803
Calcareous and red earth: adsorption characteristics of 47 elements (Na-Bi) 821
^{137}Cs *in situ* determination in soil and sediments: calibration of portable γ-detector 865
Contamination in Zaborie village in the vicinity of Chernobyl and ^{137}Cs levels 1165
From Gudalore, India: natural radionuclide distribution 299
From Semipalatinsk nuclear test site: assessment of radiation damage by ESR 1255
Red earth and solid components: effect on Cs^+ sorption and desorption 812
Sample: accounting for ^{222}Rn loss during drying for γ-ray spectroscopy 271
U content: comparison of INAA, DNC and CAS methods of determination 1003
Solidang
Computer code for computation of effective solid angle and correction factors for γ-ray spectroscopy-based waste assay 771
Source
Alpha: preparation using a rotating disk electrode technique 357
Brachytherapy, stainless steel-ceramic based ^{90}Sr–^{90}Y: radioanalytical assay methods 1
Characteristics: proper modelling for Monte Carlo simulations 777
^{166m}Ho sealed sources: development of γ-ray reference standards 545
Quantitative: preparation 351
Wide area reference: determination of activity profile 533
Soyabean
Effect of soil acidity on uptake of trace elements 803

Spectra
Beta- of ^{241}Pu: stability of measurements and analysis 387
ESR of irradiated dry ice and models for a peak on the Arrhenius curve 1259
IR and UV of 24 γ- and electron irradiated sugar crystals 1229
Pulse height of wide area reference sources of natural uranium and ^{241}Am 533
Spectrometer
α-particle response function: experimental verification 347
α-ray digital: pulse loss and counting statistics 377
Spectrometry
Gamma ray
And X-ray: use in determination of U enrichment 509
By excitation of matrix X-rays: coincidence summing 725
Efficiency transfer and coincidence summing corrections 791
Fast procedure for coincidence summing correction 745
Monte Carlo calculations of total-to-peak ratio 785
Quality control measurements 765
Ultra level: use to measure activation induced by environmental neutrons 711
Use for burn up determination in TRIGA fuel rods 105
Use for isotopic analysis of U in U_3O_8 753
Use in simultaneous determinations of Ra and Th nuclides, ^{238}U and ^{227}Ac in mining waters 717
Use of high pressure Xe detectors 739
Use to measure low radioactivity in ocean shellfish matrix 539
LS-α: sequential determination of U,Th and ^{226}Ra 705
Mass: use in analysis of volatile radiolysis products from γ-irradiated LDPE and polypropylene films 251
Neutron induced γ-ray using MCNP code: borehole parametric study 127
Spectroscopy
EPR: use in identification of irradiation of cellulose containing foodstuffs 195
ESR: review of twenty years progress 1023
ESR and ENDOR for decomposition study of irradiated sucrose 1221
γ-ray of soil samples: ^{222}Rn loss during drying 271
Mössbauer studies on laser evaporated iron atoms and their reactions with oxygen in argon matrices 157
Time interval correlation of detected neutrons for quantification of transuranic elements 399
Speleothems
PIXE elemental analysis 289
Standardization
Of ^{186}Re 581
Of ^{169}Yb by $4\pi\beta$–γ coincidence method applying the β efficiency extrapolation variant 505
Steel
Stainless, encapsulated ^{90}Sr–^{90}Y sources: radioanalytical assay 1
Strontium
Stainless steel brachytherapy source: radioanalytical assay methods 1
^{90}Sr
Distribution in pine trees planted 1997–8 in vicinity of Chernobyl 905
Removal from liquid radioactive waste using zeolite 27
Sulfate/EPR dosimeter: suitability for use in medical radiology 1217
Sugar
γ- and electron irradiated: ESR and optical absorption studies of free radical production 1229
Irradiated: EPR spectrum 1221

Sulphur
^{35}S: half life data evaluation using EVINEW program 601
Synchrotron
Radiation: use to measure linear absorption coefficients of liquid scintillators 649

Tantalum
^{180m}Ta isomer: production by (γ,n) reactions and astrophysical relevance 873
Target
$CsNO_3$: irradiation with ^{16}O beam to produce. $^{145,146}Eu$ 1393
^{18}O gas for ^{18}F production 1431
Terbium, ^{16}O activated: separation of carrier free hafnium and lutetium 1399
T-cell receptor loci
Determination of somatic mutant frequencies for biodosimetry of acute and prolonged irradiation 1145
Technetium
Analog of Re(V) complex with a 2NIS donor: radiochemical behaviour 217
^{99m}Tc
Complex with cysteine oximes: synthesis and pharmacological behaviour 69
Medical solution purity control: application of α/β discrimination in LSC 627
Teeth
Use of EPR for in vivo determination of dose after accidental exposure. 1031
Tellurium
Excitation functions of ^{120}Te(d,xn) $^{121,120m,g}I$ reactions from the threshold up to 13.5 MeV and production of ^{120g}I 923
^{122}Te and ^{120}Te: nuclear model calculations on proton deuteron induced reactions with reference to formation of $^{120m,g}I$ 937
$^{124}TeO_2$ target: use in production of ^{124}I solutions by thermodistillation 181
Terbium
Target, ^{16}O activated: separation of carrier free hafnium and lutetium 1399
Thallium
^{204}Tl solution: standardization 487
^{204}Tl standardization at IRMM by three methods 493
Thermal desorption
Use in analysis of volatile radiolysis products in γ-irradiated LDPE and polypropylene films 251
Thermodistillation
Use in production of ^{124}I from $^{124}TeO_2$ targets 181
Peaks in Greek white marbles: correlation with EPR spectra 229
Response of some phosphors: effect of lithium co-dopant 97
Thickness
Measurement using scattered radiation 759
Thorium
Concentration in Miocene rock from Carpathian Piedmont (Poland): correlation with neutron absorption cross section 1459
Determination by LS-α-spectrometry in presence of U and Ra: use of selective extractant scintillator 705
Levels in Kubanni river sediments, Nigeria 1009
Nuclides: determination in mining waters by γ-ray spectrometry 717
Thoron
Indoor levels in Hanipur and Una districts of Himachal Pradesh, India 137
Thulium
$^{165,166,1676}Tm$ carrier free: extraction from an irradiated gadolinium foil target by HDEHP 797

Tomato
Effect of soil acidity on uptake of trace elements 803
Tooth
Of a Toxodonplatensis from a Brazilian Karstic cave: ESR dating 1345
Tooth enamel
Anisotropy effects of EPR signals and mass transfer mechanisms 1077
Dating by ESR: improvements 1337
Elephant, from Kärlich Seeufer site, Germany,:ESR study 1327
EPR
Analysis: comparison of sample preparation and signal evaluation methods 1059
Dose reconstruction 1265
Dosimetry: errors and their correction 1291
Dosimetry: new computer produce assessment 1287
ESR
Dosimetry of teeth of Gioânia accident victims 1297
Dosimetry on people living in Zaborie village in vicinity of Chernobyl 1165
Fossil: EPR dose assessment using maximum likelihood common factor analysis 1317
γ-dose response and ESR spectra compared with A-type carbonated apatite 1093
Metabolism: effect on reliability of results of retrospective dosimetry 1305
Temperature stability of carbonate groups during EPR 1071
Use for assessment of retrospective dose by EPR after large scale accident 1275
Trace element
Uptake in soyabean and tomato plants: effect of soil acidity 803
Transuranic elements
Quantification of time interval correlation spectroscopy of detected neutrons 399
Trees
Pine, planted 1997-8 in vicinity of Chernobyl: ^{137}Cs and ^{90}Sr distribution 905
Triple to double coincidence ratio (TDCR) method
For standardization of pure β-emitters: computer program 673
In liquid scintillation counting 643
Tritium
Identification and removal from [^{15}O] water 175
^{3}H
Analysis of detection -efficiency variation techniques for implementation of TDCR method in LS counting 643
Half life: data evaluation using EVINEW program 601

Ultima gold™
Mass attenuation coefficient and linear absorption coefficient 649
Ultra filtration systems
For large volumes of water for determination of colloidally bound radionuclides 927
Uranium
Concentration in Miocene rocks from Carpathian Piedmont (Poland): correlation with neutron absorption cross section 1459
Determination by LS α-spectrometry: use of selective extractant scintillator in presence of Th and Ra 705
Enrichment determination: results of an international evaluation exercise 509
In soil, sediments and rock: comparison of INAA, DNC and CAS methods of determination 1003
Isotopic analysis in U_3O_8 by passive γ-ray spectrometry 753
– Thorium levels in sediments of Kubanni river, Nigeria 1009
^{234}U and ^{238}U transfer to water interacting with carbonates from Mendip hills (England) 965

^{238}U: determination in mining waters by γ-spectrometry 717
^{238}U decay: α-particle emission probabilities 591
UV/VIS light
Generation and conversion of electronic defects in calcium carbonate 1099

Vanadium
^{49}V half life determination by LSC 569

Waste
γ-ray spectroscopic assay: use of Solidang computer code for computation of effective solid angle and correction factors 771
Liquid radioactive: cleaning using natural zeolites 27
Nuclear management: quantification of transuranic elements by time interval correlation 399
Radioactive: removal of ^{125}I 1407
Treatment by radiation chemistry: considerations for choice of a figure-of-merit 189
Water
Diffusion of environmental neutrons measured by activation of gold 711
Ground water from the Mendip hills (England): transfer of ^{234}U and ^{238}U 965
Ground water from Saijo basin (Japan): tritium-^{3}He ages 987
Natural: ultrafiltration of large volumes for determination of colloidally bound artificial radionuclides 927
[^{15}O] labelled
Identification and removal of tritium 175
System for continuous production and infusion for PET studies 205
Surface and subsurface(Thule, Greenland): oxidation state distribution of plutonium 697
Tritiated standards: calibration of National Institute of Standards 527
Uranium mining: simultaneous determination of Ra and Th nuclides, ^{238}U and ^{227}Ac by γ-ray spectrometry 717

Xenon
High pressure: use in γ-spectrometers 739
X-ray
Calculation of emission probabilities in radioactive disintegration processes 595
Matrix: excitation in γ-spectrometry and coincidence summing 725
Measurements on ^{59}Fe and ^{61}Ni using cryogenic detectors 403
PIXE elemental analysis of Cuban quaternary geological samples and speleothems 289

Ytterbium
Sorption and desorption on alumina: mechanisms and effect of fulvic acid 165
^{165,166,167} Yb carrier free: extraction from gadolinium foil target by HDEHP 797
^{169}Yb
Decay data: results from the EUROMET action 410 455
Standardization and γ-ray emission probability data 499
Standardization by $4\pi\beta$-γ method 505
Yttrium
$YAlO_3$: Ce powder: properties as an α-ray detector 365

Zeolite
Use in cleaning liquid radioactive wastes 27
Zinc
ZnS(Ag) scintillation detector: selection of optimum counting conditions 891